Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A modified xylanase comprising one or more than one substituted amino acid residue selected from the group consisting of a non-polar amino acid at position 116, a Cys at position 118, a basic amino acid at position 144, and a basic amino acid at position 161, said position determined from sequence alignment of said modified xylanase with *Trichoderma reesei* xylanase II amino acid sequence defined in SEQ ID NO:16, wherein the modified Family 11 xylanase is derived from a native Family 11 xylanase that has 48-100% sequence similarity to the *Trichoderma reesei* xylanase II amino acid sequence of SEQ ID NO:16 and wherein the modified xylanase exhibits xylanase activity on a xylan substrate and ~~is a Family 11 xylanase and~~ exhibits improved thermophilicity in comparison to a corresponding native xylanase.

2. (Previously presented) The modified xylanase of claim 1, wherein the modified xylanase exhibits improved alkalophilicity, expression efficiency, or a combination thereof, in comparison to a corresponding native xylanase.

3. (Canceled)

4. (Previously presented) The modified xylanase of claim 1, wherein the basic amino acid at position 144 is selected from a group consisting of Arg and Lys.

5. (Canceled)

6. (Previously presented) The modified xylanase of claim 4, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

7. (Previously presented) The modified xylanase of claim 4, further comprising a His at positions 10 and 105, Met at position 27, Leu at position 29, Ala at positions 75 and 125, and Glu at position 129.

8. (Canceled)

9. (Previously presented) The modified xylanase of claim 1, wherein the basic amino acid at position 161 is selected from a group consisting of Arg, Lys and His.

10. (Canceled)

11. (Previously presented) The modified xylanase of claim 9, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

12. (Original) The modified xylanase of claim 9, further comprising a His at positions 10 and 105, Met at position 27, Leu at position 29, Ala at positions 75 and 125, and Glu at position 129.

13. (Previously presented) The modified xylanase of claim 12, comprising the basic amino acid at position 144.

14. (Previously presented) The modified xylanase of claim 13, wherein the basic amino acid at position 144 is selected from a group consisting of Arg and Lys.

15. (Canceled)

16. (Previously presented) The modified xylanase of claim 14, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

17. (Canceled)

18. (Previously presented) The modified xylanase of claim 1 further comprising an Asp at position 11.

19. (Canceled)

20. (Previously presented) The modified xylanase of claim 18, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

21. (Original) The modified xylanase of claim 18, further comprising a His at positions 10 and 105, Met at position 27, Leu at position 29, Ala at positions 75 and 125, and Glu at position 129.

22. (Previously presented) The modified xylanase of claim 21, comprising the basic amino acid at position 144 and the basic amino acid at position 161.

23. (Previously presented) The modified xylanase of claim 22, wherein the basic amino acid at position 144 is selected from a group consisting of Arg and Lys, and the basic amino acid at position 161 is selected from a group consisting of Arg, Lys and His.

24. (Canceled)

25. (Previously presented) The modified xylanase of claim 23, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

26. (Canceled)

27. (Previously presented) The modified xylanase of claim 1 wherein the non-polar amino acid is Gly.

28. (Canceled)

29. (Previously presented) The modified xylanase of claim 27, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

30. (Original) The modified xylanase of claim 27, further comprising a His at positions 10 and 105, Met at position 27, Leu at position 29, Ala at positions 75 and 125, and Glu at position 129.

31. (Previously presented) The modified xylanase of claim 30, further comprising an acidic amino acid at position 11, and comprising the basic amino acid at position 144 and the basic amino acid at position 161.

32. (Previously presented) The modified xylanase of claim 31, wherein the acidic amino acid at position 11 is Asp, the basic amino acid at position 144 is selected from a group consisting of Arg and Lys, and the basic amino acid at position 161 is selected from a group consisting of Arg, Lys and His.

33. (Canceled)

34. (Previously presented) The modified xylanase of claim 32, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

35-36. (Canceled)

37. (Previously presented) The modified xylanase of claim 1, wherein the modified xylanase comprises the Cys at position 118.

38. (Previously presented) The modified xylanase of claim 37, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

39. (Previously presented) The modified xylanase of claim 37, further comprising a His at positions 10 and 105, Met at position 27, Leu at position 29, Ala at positions 75 and 125, and Glu at position 129.

40. (Previously presented) The modified xylanase of claim 39, further comprising an acidic amino acid at position 11, and comprising the basic amino acid at position 144 and the basic amino acid at position 161.

41. (Previously presented) The modified xylanase of claim 40, wherein the acidic amino acid at position 11 is Asp, the basic amino acid at position 144 is selected from a group consisting of Arg and Lys, and the basic amino acid at position 161 is selected from a group consisting of Arg, Lys and His.

42. (Canceled)

43. (Previously presented) The modified xylanase of claim 41, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

44. (Previously presented) The modified xylanase of claim 40, wherein the acidic amino acid at position 11 is Asp, the non-polar amino acid at position 116 is Gly, the basic amino acid at position 144 is selected from a group consisting of Arg and Lys, and the basic amino acid at position 161 is selected from a group consisting of Arg, Lys and His.

45. (Canceled)

46. (Previously presented) The modified xylanase of claim 44, wherein the Family 11 xylanase is a *Trichoderma reesei* xylanase.

47. (Canceled)

48. (Currently amended) A method of manufacturing pulp, comprising treating the pulp with the modified xylanase of claim 1.

49. (Previously presented) A modified Family 11 xylanase comprising the sequence of TrX-H-11D-ML-75A105H-118C-125A129E-144R161R (SEQ ID NO:55), which modified xylanase exhibits improved thermophilicity in comparison to a corresponding native xylanase.

50-55. (Canceled)

56. (Previously presented) The xylanase of claim 4, wherein the basic amino acid is Arg.

57. (Previously presented) The modified xylanase of claim 1 further comprising an acidic amino acid at position 11, and comprising the non-polar amino acid at position 116, and the basic amino acid at position 144.

58. (Previously presented) The xylanase of claim 57, wherein the acidic amino acid is Asp, the non-polar amino acid is Gly, and the basic amino acid at position 144 is Arg.

59. (Previously presented) The modified xylanase of claim 1 further comprising an acidic amino acid at position 11, and comprising a Cys at position 118, and the basic amino acid at position 144.

60. (Previously presented) The xylanase of claim 59, wherein the acidic amino acid is Asp-and the basic amino acid at position 144 is Arg.

61. (Previously presented) The modified xylanase of claim 1 having a maximum effective temperature (MET) between about 69°C and about 84°C, and wherein the modified xylanase is obtained from a *Trichoderma* sp.

62. (Previously presented) The modified xylanase of claim 61, wherein the MET is between about 70° and about 84°C.

63. (Previously presented) The modified xylanase of claim 1 having a maximum effective pH (MEP) between about pH 5.8 to about pH 8.4, and wherein the modified xylanase is obtained from a *Trichoderma* sp..

64. (Previously presented) The modified xylanase of claim 63, wherein the MEP is between about pH 6.0 and about pH 8.0.

65. (Previously presented) The modified xylanase of claim 61, wherein the modified xylanase is further characterized as having a maximum effective pH (MEP) between about pH 5.8 and about pH 7.6.

66. (Previously presented) The modified xylanase of claim 62, wherein the modified xylanase is further characterized as having a maximum effective pH (MEP) between about pH 6.5 and about pH 7.4.

67. (Previously presented) The modified xylanase of claim 1, wherein the basic amino acid at position 144 is Arg, the basic amino acid at position 161 is Arg, or both the basic amino acid at position 144 and the basic amino acid at position 161 are Arg.

68. (Previously presented) The modified xylanase of claim 1, further comprising an acidic amino acid at position 11, and comprising the basic amino acid at position 144, and the basic amino acid at position 161.

69. (Previously presented) The modified xylanase of claim 68, wherein the acidic amino acid is Asp, the basic amino acid at position 144 is Arg and the basic amino acid at position 161 is Arg.

70. (Previously presented) The modified xylanase of claim 1 further comprising an acidic amino acid at position 11, and comprising the non-polar amino acid at position 116, the basic amino acid at position 144, and the basic amino acid at position 161.

71. (Previously presented) The modified xylanase of claim 1, further comprising an acidic amino acid at position 11, and wherein the non-polar amino acid is Gly, the basic amino acid at position 144 is Arg and the basic amino acid at position 161 is Arg.